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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/431,159	11/01/1999	YORAM BRONICKI	P-15149	8345

7590 08/22/2002

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EXAMINER

DOROSHENK, ALEXA A

ART UNIT PAPER NUMBER

1764

DATE MAILED: 08/22/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application N .

Applicant(s)

09/431,159

BRONICKI, YORAM

Examiner

Art Unit

Alexa A. Doroshenk

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 June 2002.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3 and 10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3 and 10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on June 10, 2002 has been entered.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 1-3 and 10 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 recites the limitation "the outlet" in lines 17 and 24. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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5. Claims 1, 3 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over van Klinken et al. (4,039,429) in view of Friday et al. (US 6,183,627 B1).

With respect to claim 1, van Klinken et al. discloses an apparatus comprising:
a heater for heating heavy hydrocarbons (13) and an atmospheric fractionating tower for fractionating the heated heavy hydrocarbon feed as a first atmospheric distilling zone (2) (Since a still contains both a heat source and a fractionating tower, van Klinken's description "atmospheric distilling zone" is equivalent to the heater and an atmospheric fractionating tower of the present invention);

a further heater and vacuum fractioning tower as first vacuum distilling zone (3) for atmospheric bottoms (19);

a de-asphalting unit (4) for de-asphalting from said vacuum residue (22); and
a cracker ¹⁰/~~(40)~~ for cracking the light fractions of both the vacuum fractionating tower (21) and de-asphalting unit oil (23).

Though only one cracker is provided by van Klinken, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide two separate crackers for each stream because the mere fact that the structure is integral does not preclude its consisting of various elements. Nerwin v. Erlichman, 168 USPQ 177, 179 (PTO Bd. of Int. 1969).

Additionally, the cracker of van Klinken et al. is a catalytic cracker (10) rather than a thermal cracker.

In a similar system, Friday et al. teach wherein it is advantageous to use a thermal, rather than catalytic conversion so that very little de-asphalted oil fractions are

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rejected (col. 3, lines 58-67). It would have been obvious to one of ordinary skill in the art at the time the invention was made to use a thermal, rather than catalytic, cracker in the apparatus of van Klinken et al. for the advantageous reasons taught by Friday et al.

With regard to the recycle means, van Klinken et al. discloses wherein the input to the apparatus is a crude oil (col. 1, lines 9-12) and wherein an output is distillation residue (43) that is crude oil (col. 1, lines 49).

Friday et al. teach a similar device wherein the products (25) of the cracker (24) are recycled to the inlet of the fractionating tower (14). It would have been obvious to one of ordinary skill in the art at the time the invention was made to apply this teaching of product recycling in order to efficiently utilize the system, especially since a product of the crackers in both references are starting products.

With regard to claims 3 and 10, the apparatus of van Klinken includes essentially the same apparatus as the present claim, including a hydrotreater (9), a heater and atmospheric fractionating unit (11) (the distilling zone includes a heater and fractionating tower), but fails to expressly disclose an additional vacuum fractionating apparatus.

Van Klinken discloses an atmospheric fractionating tower (2) followed by a vacuum fractionating tower (3). It would have been obvious to one of ordinary skill in the art at the time the invention was made to follow the atmospheric fractionating tower (11) with a vacuum fractionating tower as was done in the upstream atmospheric fractionating tower (2) to further separate the process stream into fractions.

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6. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over van Klinken et al. (4,039,429) in view of Friday et al. (US 6,183,627 B1) as applied to claim 1 above, and further in view of Bigeard et al. (6,153,087).

With respect to claim 2, van Klinken et al. disclose wherein a portion of the vacuum fraction is supplied to the cracker by a line (21), but is silent as to supplying only a heavier portion to the cracker and a lighter portion as a product.

Bigeard et al. teach a similar conversion process and disclose wherein the lighter portion of a vacuum distillate is a product and the heavier portion is sent to a cracker unit (col. 1, lines 10-13). It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide a means to accomplish such in the system of van Klinken et al. in order to sooner recover the desired light product and efficiently crack only the undesired heavier portion.

Response to Arguments

7. Applicant's arguments with respect to claims 1-3 and 10 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion


8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alexa A. Doroshenk whose telephone number is 703-305-0074. The examiner can normally be reached on Monday - Thursday from 8:30 AM - 7:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Marian Knode can be reached on 703-308-4311. The fax phone numbers

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for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.


JERRY D. JOHNSON
PRIMARY EXAMINER
GROUP 1100

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AAD
August 20, 2002